



IFWO

## RAW SEQUENCE LISTING

DATE: 08/23/2004

PATENT APPLICATION: US/10/645,723A

TIME: 16:36:25

Input Set : A:\PHOE0136.ST25.txt

Output Set : N:\CRF4\08232004\J645723A.raw

3 <110> APPLICANT: Ensor, Charles Mark  
 4       Holtsberg, Frederick Wayne  
 5       Clark, Mike A.  
 7 <120> TITLE OF INVENTION: NOVEL MUTATED FORM OF ARGININE DEIMINASE  
 9 <130> FILE REFERENCE: PHOE-0136  
 11 <140> CURRENT APPLICATION NUMBER: US 10/645,723A  
 12 <141> CURRENT FILING DATE: 2003-08-21  
 14 <150> PRIOR APPLICATION NUMBER: US 09/564,559  
 15 <151> PRIOR FILING DATE: 2000-05-04  
 17 <160> NUMBER OF SEQ ID NOS: 10  
 19 <170> SOFTWARE: PatentIn version 3.2  
 21 <210> SEQ ID NO: 1  
 22 <211> LENGTH: 409  
 23 <212> TYPE: PRT  
 24 <213> ORGANISM: Mycoplasma hominis  
 26 <400> SEQUENCE: 1  
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 32 Ile Gly Glu Leu Glu Thr Val Leu Val His Glu Pro Gly Arg Glu Ile  
 33                   20                   25                   30  
 36 Asp Tyr Ile Thr Pro Ala Arg Leu Asp Glu Leu Leu Phe Ser Ala Ile  
 37                   35                   40                   45  
 40 Leu Glu Ser His Asp Ala Arg Lys Glu His Gln Ser Phe Val Lys Ile  
 41                   50                   55                   60  
 44 Met Lys Asp Arg Gly Ile Asn Val Val Glu Leu Thr Asp Leu Val Ala  
 45 65                   70                   75                   80  
 48 Glu Thr Tyr Asp Leu Ala Ser Lys Ala Ala Lys Glu Glu Phe Ile Glu  
 49                   85                   90                   95  
 52 Thr Phe Leu Glu Glu Thr Val Pro Val Leu Thr Glu Ala Asn Lys Lys  
 53                   100                   105                   110  
 56 Ala Val Arg Ala Phe Leu Leu Ser Lys Pro Thr His Glu Met Val Glu  
 57                   115                   120                   125  
 60 Phe Met Met Ser Gly Ile Thr Lys Tyr Glu Leu Gly Val Glu Ser Glu  
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 64 Asn Glu Leu Ile Val Asp Pro Met Pro Asn Leu Tyr Phe Thr Arg Asp  
 65 145                   150                   155                   160  
 68 Pro Phe Ala Ser Val Gly Asn Gly Val Thr Ile His Phe Met Arg Tyr  
 69                   165                   170                   175  
 72 Ile Val Arg Arg Arg Glu Thr Leu Phe Ala Arg Phe Val Phe Arg Asn  
 73                   180                   185                   190  
 76 His Pro Lys Leu Val Lys Thr Pro Trp Tyr Tyr Asp Pro Ala Met Lys  
 77                   195                   200                   205  
 80 Met Pro Ile Glu Gly Gly Asp Val Phe Ile Tyr Asn Asn Glu Thr Leu



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84 Val Val Gly Val Ser Glu Arg Thr Asp Leu Asp Thr Ile Thr Leu Leu
85 225      230      235      240
88 Ala Lys Asn Ile Lys Ala Asn Lys Glu Val Glu Phe Lys Arg Ile Val
89      245      250      255
92 Ala Ile Asn Val Pro Lys Trp Thr Asn Leu Met His Leu Asp Thr Trp
93      260      265      270
96 Leu Thr Met Leu Asp Lys Asn Lys Phe Leu Tyr Ser Pro Ile Ala Asn
97      275      280      285
100 Asp Val Phe Lys Phe Trp Asp Tyr Asp Leu Val Asn Gly Gly Ala Glu
101      290      295      300
104 Pro Gln Pro Gln Leu Asn Gly Leu Pro Leu Asp Lys Leu Leu Ala Ser
105 305      310      315      320
108 Ile Ile Asn Lys Glu Pro Val Leu Ile Pro Ile Gly Gly Ala Gly Ala
109      325      330      335
112 Thr Glu Met Glu Ile Ala Arg Glu Thr Asn Phe Asp Gly Thr Asn Tyr
113      340      345      350
116 Leu Ala Ile Lys Pro Gly Leu Val Ile Gly Tyr Asp Arg Asn Glu Lys
117      355      360      365
120 Thr Asn Ala Ala Leu Lys Ala Ala Gly Ile Thr Val Leu Pro Phe His
121      370      375      380
124 Gly Asn Gln Leu Ser Leu Gly Met Gly Asn Ala Arg Cys Met Ser Met
125 385      390      395      400
128 Pro Leu Ser Arg Lys Asp Val Lys Trp
129      405
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133 <211> LENGTH: 409
134 <212> TYPE: PRT
135 <213> ORGANISM: Mycoplasma hominis
137 <400> SEQUENCE: 2
139 Met Ser Val Phe Asp Ser Lys Phe Asn Gly Ile His Val Tyr Ser Glu
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144      20      25      30
147 Asp Tyr Ile Thr Pro Ala Arg Leu Asp Glu Leu Leu Phe Ser Ala Ile
148      35      40      45
151 Leu Glu Ser His Asp Ala Arg Lys Glu His Gln Ser Phe Val Lys Ile
152      50      55      60
155 Met Lys Asp Arg Gly Ile Asn Val Val Glu Leu Thr Asp Leu Val Ala
156 65      70      75      80
159 Glu Thr Tyr Asp Leu Ala Ser Lys Ala Ala Lys Glu Glu Phe Ile Glu
160      85      90      95
163 Thr Phe Leu Glu Glu Thr Val Pro Val Leu Thr Glu Ala Asn Lys Glu
164      100      105      110
167 Ala Val Arg Ala Phe Leu Leu Ser Lys Pro Thr His Glu Met Val Glu
168      115      120      125
171 Phe Met Met Ser Gly Ile Thr Lys Tyr Glu Leu Gly Val Glu Ser Glu
172      130      135      140
175 Asn Glu Leu Ile Val Asp Pro Met Pro Asn Leu Tyr Phe Thr Arg Asp

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176 145          150          155          160
179 Pro Phe Ala Ser Val Gly Asn Gly Val Thr Ile His Phe Met Arg Tyr
180          165          170          175
183 Ile Val Arg Arg Arg Glu Thr Leu Phe Ala Arg Phe Val Phe Arg Asn
184          180          185          190
187 His Pro Lys Leu Val Lys Thr Pro Trp Tyr Tyr Asp Pro Ala Met Lys
188          195          200          205
191 Met Pro Ile Glu Gly Gly Asp Val Phe Ile Tyr Asn Asn Glu Thr Leu
192          210          215          220
195 Val Val Gly Val Ser Glu Arg Thr Asp Leu Asp Thr Ile Thr Leu Leu
196 225          230          235          240
199 Ala Lys Asn Ile Lys Ala Asn Lys Glu Val Glu Phe Lys Arg Ile Val
200          245          250          255
203 Ala Ile Asn Val Pro Lys Trp Thr Asn Leu Met His Leu Asp Thr Trp
204          260          265          270
207 Leu Thr Met Leu Asp Lys Asn Lys Phe Leu Tyr Ser Pro Ile Ala Asn
208          275          280          285
211 Asp Val Phe Lys Phe Trp Asp Tyr Asp Leu Val Asn Gly Gly Ala Glu
212          290          295          300
215 Pro Gln Pro Gln Leu Asn Gly Leu Pro Leu Asp Lys Leu Leu Ala Ser
216 305          310          315          320
219 Ile Ile Asn Lys Glu Pro Val Leu Ile Pro Ile Gly Gly Ala Gly Ala
220          325          330          335
223 Thr Glu Met Glu Ile Ala Arg Glu Thr Asn Phe Asp Gly Thr Asn Tyr
224          340          345          350
227 Leu Ala Ile Lys Pro Gly Leu Val Ile Gly Tyr Asp Arg Asn Glu Lys
228          355          360          365
231 Thr Asn Ala Ala Leu Lys Ala Ala Gly Ile Thr Val Leu Pro Phe His
232          370          375          380
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240          405
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244 <211> LENGTH: 409
245 <212> TYPE: PRT
246 <213> ORGANISM: Mycoplasma hominis
248 <400> SEQUENCE: 3
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254 Ile Gly Glu Leu Glu Thr Val Leu Val His Glu Pro Gly Arg Glu Ile
255          20          25          30
258 Asp Tyr Ile Thr Pro Ala Arg Leu Asp Glu Leu Leu Phe Ser Ala Ile
259          35          40          45
262 Leu Glu Ser His Asp Ala Arg Lys Glu His Gln Ser Phe Val Lys Ile
263          50          55          60
266 Met Lys Asp Arg Gly Ile Asn Val Val Glu Leu Thr Asp Leu Val Ala
267 65          70          75          80
270 Glu Thr Tyr Asp Leu Ala Ser Lys Ala Ala Lys Glu Glu Phe Ile Glu

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271      85      90      95
274 Thr Phe Leu Glu Glu Thr Val Pro Val Leu Thr Glu Ala Asn Lys Lys
275      100      105      110
278 Ala Val Arg Ala Phe Leu Leu Ser Lys Pro Thr His Glu Met Val Glu
279      115      120      125
282 Phe Met Met Ser Gly Ile Thr Lys Tyr Glu Leu Gly Val Glu Ser Glu
283      130      135      140
286 Asn Glu Leu Ile Val Asp Pro Met Pro Asn Leu Tyr Phe Thr Arg Asp
287 145      150      155      160
290 Pro Phe Ala Ser Val Gly Asn Gly Val Thr Ile His Phe Met Arg Tyr
291      165      170      175
294 Ile Val Arg Arg Arg Glu Thr Leu Phe Ala Arg Phe Val Phe Arg Asn
295      180      185      190
298 His Pro Lys Leu Val Lys Thr Pro Trp Tyr Tyr Asp Pro Ala Met Lys
299      195      200      205
302 Met Ser Ile Glu Gly Gly Asp Val Phe Ile Tyr Asn Asn Glu Thr Leu
303      210      215      220
306 Val Val Gly Val Ser Glu Arg Thr Asp Leu Asp Thr Ile Thr Leu Leu
307 225      230      235      240
310 Ala Lys Asn Ile Lys Ala Asn Lys Glu Val Glu Phe Lys Arg Ile Val
311      245      250      255
314 Ala Ile Asn Val Pro Lys Trp Thr Asn Leu Met His Leu Asp Thr Trp
315      260      265      270
318 Leu Thr Met Leu Asp Lys Asn Lys Phe Leu Tyr Ser Pro Ile Ala Asn
319      275      280      285
322 Asp Val Phe Lys Phe Trp Asp Tyr Asp Leu Val Asn Gly Gly Ala Glu
323      290      295      300
326 Pro Gln Pro Gln Leu Asn Gly Leu Pro Leu Asp Lys Leu Leu Ala Ser
327 305      310      315      320
330 Ile Ile Asn Lys Glu Pro Val Leu Ile Pro Ile Gly Gly Ala Gly Ala
331      325      330      335
334 Thr Glu Met Glu Ile Ala Arg Glu Thr Asn Phe Asp Gly Thr Asn Tyr
335      340      345      350
338 Leu Ala Ile Lys Pro Gly Leu Val Ile Gly Tyr Asp Arg Asn Glu Lys
339      355      360      365
342 Thr Asn Ala Ala Leu Lys Ala Ala Gly Ile Thr Val Leu Pro Phe His
343      370      375      380
346 Gly Asn Gln Leu Ser Leu Gly Met Gly Asn Ala Arg Cys Met Ser Met
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351      405
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355 <211> LENGTH: 409
356 <212> TYPE: PRT
357 <213> ORGANISM: Mycoplasma hominis
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365 Ile Gly Glu Leu Glu Thr Val Leu Val His Glu Pro Gly Arg Glu Ile

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```

366          20          25          30
369 Asp Tyr Ile Thr Pro Ala Arg Leu Asp Glu Leu Leu Phe Ser Ala Ile
370          35          40          45
373 Leu Glu Ser His Asp Ala Arg Lys Glu His Gln Ser Phe Val Lys Ile
374          50          55          60
377 Met Lys Asp Arg Gly Ile Asn Val Val Glu Leu Thr Asp Leu Val Ala
378 65          70          75          80
381 Glu Thr Tyr Asp Leu Ala Ser Lys Ala Ala Lys Glu Glu Phe Ile Glu
382          85          90          95
385 Thr Phe Leu Glu Glu Thr Val Pro Val Leu Thr Glu Ala Asn Lys Glu
386          100         105         110
389 Ala Val Arg Ala Phe Leu Leu Ser Lys Pro Thr His Glu Met Val Glu
390          115         120         125
393 Phe Met Met Ser Gly Ile Thr Lys Tyr Glu Leu Gly Val Glu Ser Glu
394          130         135         140
397 Asn Glu Leu Ile Val Asp Pro Met Pro Asn Leu Tyr Phe Thr Arg Asp
398 145         150         155         160
401 Pro Phe Ala Ser Val Gly Asn Gly Val Thr Ile His Phe Met Arg Tyr
402          165         170         175
405 Ile Val Arg Arg Arg Glu Thr Leu Phe Ala Arg Phe Val Phe Arg Asn
406          180         185         190
409 His Pro Lys Leu Val Lys Thr Pro Trp Tyr Tyr Asp Pro Ala Met Lys
410          195         200         205
413 Met Ser Ile Glu Gly Gly Asp Val Phe Ile Tyr Asn Asn Glu Thr Leu
414          210         215         220
417 Val Val Gly Val Ser Glu Arg Thr Asp Leu Asp Thr Ile Thr Leu Leu
418 225         230         235         240
421 Ala Lys Asn Ile Lys Ala Asn Lys Glu Val Glu Phe Lys Arg Ile Val
422          245         250         255
425 Ala Ile Asn Val Pro Lys Trp Thr Asn Leu Met His Leu Asp Thr Trp
426          260         265         270
429 Leu Thr Met Leu Asp Lys Asn Lys Phe Leu Tyr Ser Pro Ile Ala Asn
430          275         280         285
433 Asp Val Phe Lys Phe Trp Asp Tyr Asp Leu Val Asn Gly Gly Ala Glu
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437 Pro Gln Pro Gln Leu Asn Gly Leu Pro Leu Asp Lys Leu Leu Ala Ser
438 305         310         315         320
441 Ile Ile Asn Lys Glu Pro Val Leu Ile Pro Ile Gly Gly Ala Gly Ala
442          325         330         335
445 Thr Glu Met Glu Ile Ala Arg Glu Thr Asn Phe Asp Gly Thr Asn Tyr
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449 Leu Ala Ile Lys Pro Gly Leu Val Ile Gly Tyr Asp Arg Asn Glu Lys
450          355         360         365
453 Thr Asn Ala Ala Leu Lys Ala Ala Gly Ile Thr Val Leu Pro Phe His
454          370         375         380
457 Gly Asn Gln Leu Ser Leu Gly Met Gly Asn Ala Arg Cys Met Ser Met
458 385         390         395         400
461 Pro Leu Ser Arg Lys Asp Val Lys Trp
462          405

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**VERIFICATION SUMMARY**

PATENT APPLICATION: US/10/645,723A

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